

ABSTRACT

[0072] A method for processing polycrystalline silicon workpieces to form size distributions of polycrystalline silicon pieces suitable for use in a Czochralski-type process includes: (1) preparing a polycrystalline silicon workpiece by a chemical vapor deposition process; (2) fracturing the polycrystalline silicon workpiece into a mixture of polycrystalline silicon pieces, where the polycrystalline silicon pieces have varying sizes; and (3) sorting the mixture of polycrystalline silicon pieces into at least two size distributions. Step (2) may be carried out by a thermal shock process. Step (3) may be carried out using a rotary indent classifier. A rotary indent classifier for performing the method includes: (i) a rotating cylinder having a circumferential edge with indents arrayed in increasing size from a first end of the cylinder to a second end of the cylinder, and (ii) a conveyor running longitudinally adjacent the cylinder, for conveying silicon pieces from the first end of the cylinder to the second end of the cylinder.